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AMSAT NEWS SERVICE
ANS-155

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The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

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ANS-155 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2023 June 4

Astronauts Engage in Voice Contacts from International Space Station

Amateur radio enthusiasts were thrilled as astronauts aboard the International Space Station (ISS) engaged in voice contacts as NA1SS over the period of May 25-29. The astronauts, John Shoffner, KO4MJC and Woody Hoburg, KB3HTZ, provided an opportunity for amateur radio operators to establish contact with the orbiting space station.

The Amateur Radio on the ISS (ARISS) program facilitated these voice contacts, allowing radio operators to communicate with the astronauts onboard the ISS. As the news spread on social media, amateur radio operators shared their excitement about making successful contacts with the astronauts.

Hams from different parts of the world, including Europe, the United

States, and the United Kingdom, shared their experiences of communicating with the ISS crew on Twitter. The astronauts were actively seeking information about the location of each station, showing a keen interest in the diverse range of contacts they were making.

The ARISS program encourages participants to submit QSL cards to commemorate their successful contacts. These cards serve as proof of communication with the International Space Station. The ARISS website provides information on how to send in QSL cards and further details about the program. The QSL contacts are regional so find the proper one at: https://ariss.org/qsl-cards.html

For many radio operators, making contact with the International Space Station is a memorable experience. The ability to communicate with astronauts orbiting the Earth, even if only for a brief moment, is a testament to the power of amateur radio and its ability to connect people across vast distances.

As the ARISS program continues to facilitate these voice contacts, space and amateur radio enthusiasts eagerly await further opportunities to establish communication with the astronauts onboard the ISS. The chance to exchange greetings and information with those who reside in space remains a unique experience that showcases the wonders of technology and human ingenuity.

Operators interested in attempting a contact with the ISS crew, should set the downlink frequency to 437.800 MHz FM and listen for activity. The uplink frequency is 145.990 MHz FM with a PL tone of 67 Hz. The ARISS website and the AMSAT status page provide information on the ISS crew's radio activities. See https://www.ariss.org/contact-the-iss.html for details.

[ANS thanks Mitch Ahrenstorff, AD0HJ, for the above information.]

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[ANS thanks Joe Koronowski, Editor AMSAT Journal for the above information]

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New Record Set with Seventeen People in Earth Orbit Simultaneously

In a remarkable achievement, the number of individuals in Earth orbit has reached a new record high. On May 30, 2023, a total of seventeen people from five different countries were in Earth orbit.

The population in orbit skyrocketed with the launch of China's Shenzhou 16 mission, which took place on May 29 at 9:31 p.m. EDT. This three-person mission propelled the overall count to a new record. Previously, the record stood at fourteen people, achieved during the privately funded Inspiration4 mission in September 2021.

The current count consists of four crews representing various space agencies and private ventures. The first crew, Shenzhou 16, consists of Chinese taikonauts Jing Haipeng, Zhu Yangzhu, and Gui Haichao, who have joined the astronauts already aboard China's Tiangong space station. This mission contributes three members to the total count.

The second crew, Shenzhou 15, consists of Fei Junlong, Deng Qingming, and Zhang Lu. They have been residing aboard the Tiangong space station since November 2022 and are expected to return to Earth in early June. Their presence adds another three individuals to the record-breaking count.

The third crew, Expedition 69, comprises seven members from different countries. It includes cosmonauts Sergey Prokopyev, Dmitry Petelin, and Andrey Fedyaev from Russia's Roscosmos, as well as astronauts Frank Rubio, Stephen Bowen, KI5BKB, and Warren "Woody" Hoburg, KB3HTZ, from NASA. Emirati astronaut Sultan AlNeyadi, KI5VTV, of the United Arab Emirates (UAE) also joins them. These individuals are currently on the International Space Station (ISS), contributing significantly to the total population in orbit.

The fourth crew, Axiom-2, is composed of Axiom Space astronaut Peggy Whitson, private astronaut John Shoffner, KO4MJC, and Saudi Arabian astronauts Ali AlQarni, 7Z1AJ, and Rayyanah Barnawi, 7Z1RB. They departed the ISS aboard SpaceX's Crew Dragon "Freedom" on May 30. The Axiom-2 crew splashed down off the Florida panhandle near Panama City around 11 p.m. on May 30, reducing the count to thirteen people.

Interestingly, the current record-breaking count coincides with another milestone. Barnawi, a member of the Ax-2 mission, became the 600th person to enter Earth orbit. She also holds the distinction of being the first Saudi woman in space, as she launched alongside her crew on May 21.

Although the record stands at seventeen people in Earth orbit, it's worth noting that a recent record for the most people in space (not just in Earth orbit) was set briefly. For approximately five minutes, a total of twenty individuals were off the planet. This record occurred when the six members of Virgin Galactic's Unity 25 SpaceShipTwo crew embarked on a suborbital spaceflight, coinciding with three Chinese taikonauts residing aboard Tiangong and eleven astronauts, cosmonauts, and spaceflight participants aboard the International Space Station.

The previous record for the most people in space simultaneously was set during Blue Origin's New Shepard NS-19 suborbital flight on December 11, 2021, when there were briefly nineteen individuals off Earth.

Since the year 2000, there has been an unbroken presence of humans in space, starting with the first crew to inhabit the International Space Station. China's completion of its three-module Tiangong space station last year marks another significant milestone. The Shenzhou 16 crew represents the station's fifth contingent since 2021.

[ANS thanks Robert Z. Pearlman, Space.com Contributor, for the above information]

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crew rotation flights to the space station on a schedule of about once per year beginning in 2024.

Boeing and NASA officials did not provide an estimate for when engineers might resolve the newest technical problems on the Starliner spacecraft.

[ANS thanks SpaceflightNow for the above information]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

Recently completed:
About Gagarin From Space, SBEI Secondary School No. 285 of the Krasnoselsky District of St. Petersburg, Saint Petersburg, Russia, direct via R1AIT. The ISS callsign was RSØISS. The crewmember was Andrey Fediaev and the ARISS mentor was RV3DR. Contact was successful on 2023-05-27 at 16:48 UTCCongratulations to the St. Petersburg students, Andrey, and mentor RV3DR!

About Gagarin From Space, Muslyumovo, Republic of Tatarstan, Russia, direct via RC4P. The ISS callsign was RSØISS. The crewmember was Dmitry Petelin and the ARISS mentor was RV3DR. Contact was successful on 2023-05-28 at 14:26 UTC. Congratulations to the Muslyumovo students, Dmitry, and mentor RV3DR!

Mohammad Bin Rashid Space Centre, Dubai, UAE, direct via A68MBR. The ISS callsign was OR4ISS. The crewmember was Sultan Al Neyadi. KI5VTV, and the ARISS mentor was ON6TI. Contact was successful on Wed 2023-05-31 at 08:42:20 UTC. Congratulations to the Mohammad Bin Rashid Space Centre students, Sultan Al Neyadi KI5VTV, and mentor ON6TI!

Mohammad Bin Rashid Space Centre, Dubai, UAE, direct via A68MBR. The crewmember was Sultan Al Neyadi. KI5VTV, and the ARISS mentor was ON6TI. Contact was successful on Thu 2023-06-01 07:53:35 UTC. Congratulations to the Mohammad Bin Rashid Space Centre students, Sultan Al Neyadi KI5VTV, and mentor ON6TI!

About Gagarin From Space, MAOU Ust-Ivanovo Secondary School, Blagoveshchensk, Russia, direct via RKØJ. The ISS callsign was RSØISS. The crewmember was Dmitry Petelin and the ARISS mentor was RV3DR. Contact was successful: Thu 2023-06-01 08:10 UTC. Congratulations to the MAOU Ust-Ivanovo Secondary School students, Dmitry, and mentor RV3DR!

Upcoming contacts:
Saint Petersburg, Russia, direct via TBD. The ISS callsign is presently scheduled to be RSØISS. The scheduled crewmember is Sergey Prokopyev. The ARISS mentor is RV3DR. Contact is go for Sat 2023-06-10 10:15 UTC

The crossband repeater continues to be active (145.990 MHz up {PL 67} & 437.800 MHz down). If any crewmember is so inclined, all they have to do is pick up the microphone, raise the volume up, and talk on the crossband repeater. So give a listen, you just never know.

The packet system is also active (145.825 MHz up & down).

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol.

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

The latest information on the operation mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

Upcoming Satellite Operations

>From Jerry, W8LR: June 4 EN80/EN81 gridline. Logging as W8LR and operating on IO-117, RS-44, JO-97, AO-7 Mode B, and AO-91 if available.

Please submit any additions or corrections to k5zm (at) comcast (dot) net.

[ANS thanks Ian Parsons, K5ZM, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

+ AMSAT Space Symposium and Annual General Meeting
  October 20-21, 2013
  Dallas, Texas

AMSAT Ambassador Clint Bradford, K6LCS, says,
"Think a 75-minute presentation on "working the easy satellites" would be appropriate for your club or event? Let me know by emailing me at k6lcsclint (at) gmail (dot) com or calling me at 909-999-SATS (7287)!"

Clint has NEVER given the exact same show twice: EACH of the 150+ presentations so far has been customized/tailored to their audiences. An email message received after a recent presentation:

"I really enjoyed Clint's presentation last night. The fact that he had taken the time to research and know something about his audience and welcomed interaction made it very informative and enjoyable. This was a refreshing change from many canned YouTube presentations I've tried to watch, which were poorly done, fuzzy video or muddy audio, or a badly prepared presenter stumbling his way through, with any valuable info lost along the way. Thanks for hooking this one up."

[ANS thanks Clint Bradford, K6LCS, and AMSAT for the above information]

Satellite Shorts From All Over

+ A casual meeting of QO-100 users is being planned for Saturday, June 24, 2023 starting at 19:00 CEST at a restaurant near the HAM RADIO trade show in Friedrichshafen, Germany. Members of AMSAT-DL and QO-100 DX Club have

already confirmed their participation. Others interested are asked to confirm their participation at: https://nuudel.digitalcourage.de/PCbXouT7CSXsKPUa More details will follow here shortly before the event. (ANS thanks AMSAT-DL for the above information)

+ Virgin Orbit, the launch provider for AO-109, sold its assets at bankruptcy auction and shut down on May 22. Rocket Lab bought the company's Long Beach headquarters ($16.1M), Stratolaunch bought their modified 747 ($17M), and Launcher (now owned by Vast) bought a Mojave facility along with sundry equipment ($2.7M). (ANS thanks The Orbital Index for the above information)

+ If we received an extraterrestrial message, how would we interpret it? On 24 May, a signal was transmitted by the Trace Gas Orbiter -- a European Space Agency (ESA) spacecraft orbiting Mars -- and was received at the Green Bank Telescope (West Virginia), the Medicina Radio Astronomical Station (Italy), the Allen Telescope Array (California) and the Very Large Array (New Mexico). ESA, SETI, and other partners are asking individuals and groups to take part in decoding and interpreting the content of the message. To participate, go to https://asignin.space/decode-the-message/ (ANS thanks The Orbital Index and A Sign in Space for the above information)

+ N3FJP Software has recently released Amateur Contact Log 7.0.8 which includes API enhancements to support the SatPC32 interface by Carsten Groen, OZ9AAR: https://moonbounce.dk/hamradio/satpc32-to-aclog-interface.html (ANS thanks Scott Davis, N3FJP, for the above information)

+ The FO-99 operating schedule for June, 2023 is available at https://www.jamsat.or.jp/?p=2274 (ANS thanks JAMSAT for the above information)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Mark Johns, KØJM
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